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**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Peter HAWKINS et al.

Group Art Unit: 1641

Application No.: 09/816,225

Examiner: P. DO

Filed: March 26, 2001

Docket No.: 109068

For: PARAMAGNETIC PARTICLE DETECTION (AS AMENDED)

**SUMMARY OF SUBSTANCE OF INTERVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants' representative conducted a personal interview with Examiners Do and Le on April 19, 2006. Applicants appreciate the courtesies shown to Applicants' representative by the Examiners during the personal interview. Applicants separate record of a summary of the substance of the interview is included in the following remarks.

Applicants' representative began the personal interview by referring Examiners Do and Le to Applicants' Request for Reconsideration filed on April 11, 2006. Applicants' representative reviewed with the Examiners the extensive prosecution of this application to date to include that the application had been once up on Appeal, and in the Office Action previous to the one to which Applicants' April 11 Request for Reconsideration responds, all of the claims were indicated as being free of prior art.

Applicants' representative continued the personal interview by asserting that U.S. Patent No. 3,858,111 to Simpson fails to teach a phase locked loop as is recited in the subject matter of the pending claims. The Examiners asserted that the phase locked loop "is defined

in the claim as comprising a 'driver' and a 'phase comparator,' " which elements the Examiners assert are disclosed in Simpson.

Applicants' representative strongly traversed the Examiners' conclusions in this regard indicating that the phase locked loop of Applicants' claims is not "defined" by the claims. Rather, the driver and phase comparator components are indicated as the phase locked loop comprising them. The term phase locked loop, as it is recited in the pending claims, has been the subject of extensive discussion throughout prosecution of this application. The phase locked loop is adequately described throughout Applicants' specification, for example, in the paragraph beginning on page 5, line 1, in which it is stated that a phase locked loop is particularly advantageous because it allows the resonant frequency of the tuned circuit to be accurately determined without human intervention resulting in highly accurate results.

Applicants' representative strongly traversed the Examiners' conclusions that, simply by finding a driver and a phase comparator in Simpson, the phase locked loop as recited in Applicants' claims can be considered to be suggested.

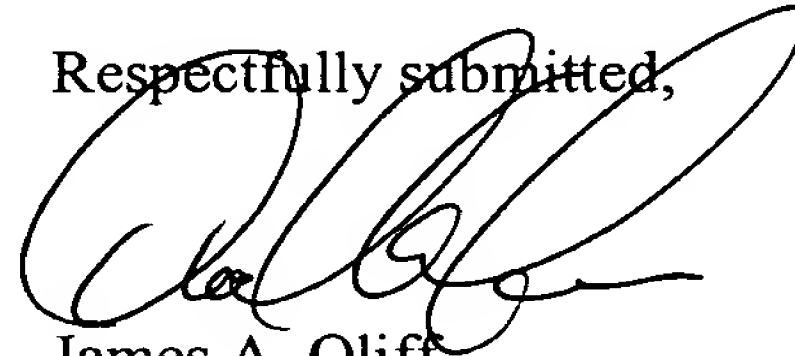
Additionally, Applicants' representative asserted that the finding of a driver and a phase comparator in the Simpson reference does not render obvious the feature determining the number of magnetic particles bound to the substrate by determining the difference in the resonant frequency of a tuned circuit when the substrate is exposed to a magnetic field generated by a coil and when the substrate is not exposed to the magnetic field generated by the coil wherein the tuned circuit is connected to a phase locked loop comprising a driver which generates a driving signal for the tuned circuit, and a phase comparator for determining the phase difference between the driving signal and an output obtained from the tuned circuit, the difference in resonant frequency being determined by monitoring the performance of the phase locked loop. Ignoring the term phase locked loop as it is recited in the context of this feature, and as discussed in Applicants' disclosure and/or ignoring the totality of the above

feature for what it recites, simply based on finding a driver and a phase comparator in a reference, Applicants' representative argued is an improper basis upon which to attempt to render obvious the subject matter of the pending claims.

Examiners Le and Do were unpersuaded by these arguments and agreed that a detailed response to Applicants' April 11 Request for Reconsideration would include the Examiners' ongoing rationale for believing that the subject matter of the pending claims is obvious in light of the combination of applied prior art references.

Should any questions arise regarding this correspondence, all inquiries may be directed to Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



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JAO:DAT/cfr

Date: April 21, 2006

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